

# Guided Experiential Learning: Training Design and Evaluation

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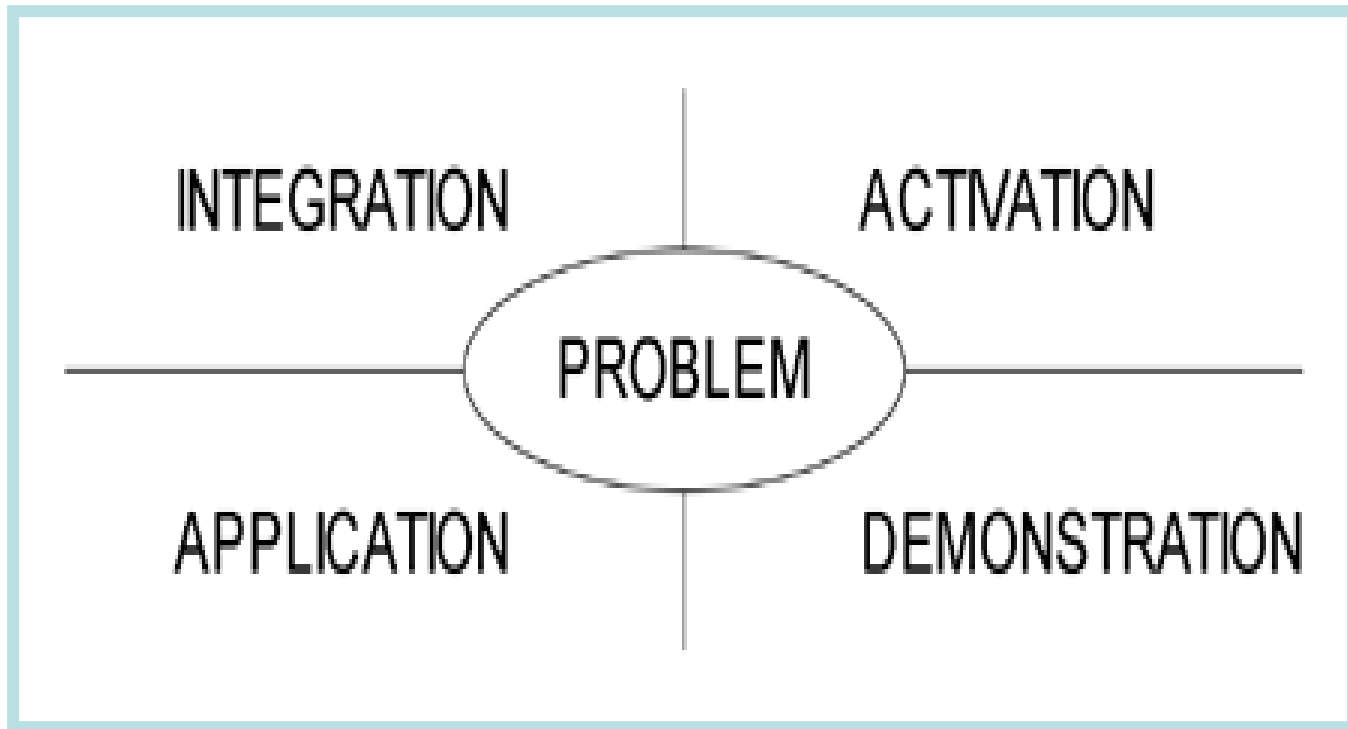
# Three Foundations of GEL

- Office of Naval Research Review of most effective pedagogical strategies for DL  
*“What works in DL”* (2004) O’Neil (Ed.) Infoage.
- Merrill’s “First Principles” review of best design models (ETR&D, 2002, 50[2], 50-59)
- Mayer and Reiser et al critiques of “Discovery Learning” and unguided problem-based learning (Mayer, R, 2004; “Three Strikes Rule”, *American Psychologist*, 59(1).

# Merrill Captured Effective Components of All Design Models

Reviewed 30+ models and identified five components that were common to all effective models:

1. Solve real problems from field
2. Activate relevant prior knowledge
3. Demonstrate how to solve
4. Apply what is learned by solving
5. Integrate learning so that it reflects real field conditions



Five Most Important Design Elements  
of  
Guided Experiential Learning

# Guided Experiential Learning Compared to Unguided Immersion and Features Training

## Comparing GEL to Unguided learning

Three training groups (50 adults in each group) learning to use Excel Spreadsheet:

1. Unguided Experiential learning lesson
2. Standard “features” training from Excel
3. Guided Experience – Model we will discuss

# Comparing GEL With Other Design Systems

Merrill's study of pure, guided and standard training to use excel spreadsheets

	<b>Learning Satisfaction</b>	<b>Time</b>	
<b>Pure</b>	34%	60 min+	High
<b>Standard</b>	68%	49 min	Low
<b>Guided</b>	89%	29 min	High

# 5 Components of Guided Experiential Learning

- 1. Goals** (what trainees will be able to do)
- 2. Reasons** (Benefits and Risks)
- 3. Overview** (What you need to know)
- 4. Demonstration** (of the procedure)
- 5. Practice and Feedback.**

# Overview of DL Design

Select Goals & SME's



Identify Many Job and Mission Problems



Cognitive Task Analysis



## Design Blueprint

- Sequence Lessons
- Design each lesson with
  - Goals and Reasons
  - Background
  - Demonstration, practice & feedback
- Design Job Aids for transfer



## Information

- How to act and decide
- New concepts, processes
- Equipment and materials
- Performance standards



Select delivery media



## Evaluation

- Four level evaluation
- Test of prior knowledge
- Transfer letters



# **Instructional Methods for Each Lesson**

## **Lesson Sequence:**

### **1. Goals –**

- You will learn how to (REMEMBER, DO, APPLY...)

### **2. Reasons**

- Value of learning - consequences of not learning
- What you already know that you should use

### **3. What You Need to Know to Perform**

- Teach new concepts and processes needed to learn procedure
- Give job aid's based on CTA procedure

#### **Design**

- Sequence Lessons
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### Design

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## 5. Practice & Feedback –

First show easy problem and solution – ask for questions – do not focus on errors but on “correcting strategies”

- Second, next easy problem and half of solution  
Ask trainees to complete it for practice  
Focus them on job aid for reminders
- Third, give moderate problem and  $\frac{1}{4}$  solution
- Fourth, moderate then complex and ask them to solve

- Gradually fade support – training wheels come off!

# Application of GEL Model to Development of “Serious” Games

